

- 1 **Q. (Reference NLH-NP-013, 19) NP states that 64% of the company's transmission**  
 2 **lines will be 40 years of age or older in 2021. Please provide a listing of these**  
 3 **transmission lines, the age of each, and the criteria NP has in place in determining**  
 4 **which lines need maintenance and which lines need replacement. What is the**  
 5 **Canadian average pertaining to the age of transmission lines prior to the**  
 6 **replacement of same?**
- 7
- 8 **A.** Table 1 provides a listing of the transmission lines that will be 40 years of age or older in  
 9 2021.

**Table 1**  
**Transmission Lines 40 Years of Age or Older**

<b>Transmission Line</b>	<b>Age (yrs)</b>	<b>Transmission Line</b>	<b>Age (yrs)</b>	<b>Transmission Line</b>	<b>Age (yrs)</b>
004 L	43	064 L	48	124 L	57
012 L	55	065 L	47	130 L	52
013 L	43	066 L	45	132 L	45
014 L	55	067 L	52	133 L	44
015 L	51	068 L	47	134 L	46
018 L	44	069 L	41	136 L	40
019 L	51	072 L	46	140 L	54
032 L	44	073 L	46	142 L	43
034 L	48	079 L	46	144 L	52
035 L	56	080 L	41	146 L	57
038 L	53	086 L	52	300 L	45
039 L	44	094 L	52	305 L	46
040 L	46	095 L	52	308 L	45
041 L	47	100 L	57	351 L	45
042 L	50	101 L <sup>1</sup>	64	352 L	56
046 L	50	102 L <sup>1</sup>	63	353 L	45
047 L	50	103 L	48	356 L	54
048 L	54	105 L	58	358 L	45
049 L	45	108 L	56	401 L	44
051 L	45	109 L	45	402 L	44
052 L	45	110 L	47	403 L	61
054 L	46	114 L	49	405 L	46
055 L	53	115 L	49	406 L	40
056 L	47	116 L	48	407 L	45
058 L	52	121 L	45	410 L	46
059 L	48	123 L	45	417 L	52

<sup>1</sup> The replacement of transmission lines 101L and 102L are being addressed through the extension of the 138 kV transmission system in Central Newfoundland as recommended in the *Central Newfoundland System Planning Study* included in Newfoundland Power's 2019 Capital Budget Application.

1 Newfoundland Power's transmission lines are inspected annually. These annual  
2 inspections determine the condition of transmission lines and whether rebuilding a  
3 section of line or selectively replacing deteriorated components is required. The  
4 evaluation criteria used during the annual inspection of transmission lines is detailed in  
5 the Company's *Transmission Inspection and Maintenance Practices*.<sup>2</sup>  
6

7 Newfoundland Power's approach to rebuilding sections of lines has focused on  
8 transmission lines built in the 1940s, 1950s and 1960s. These lines were not built to a  
9 particular standard and were therefore not engineered to withstand local weather  
10 conditions, making them more susceptible to failure.<sup>3</sup> The Company determines when to  
11 rebuild these lines based on: (i) a line's physical condition; (ii) its risk of failure; and  
12 (iii) the impact a failure would have on customers. Rebuilt lines are constructed to  
13 current Canadian Standards Association standards, making them better able to withstand  
14 the severe weather conditions experienced throughout Newfoundland Power's service  
15 territory.  
16

17 The selective replacement of deteriorated components is routinely conducted as part of  
18 the Company's annual inspection and maintenance practices. In some cases, the selective  
19 replacement of deteriorated components allows for extension of the useful service lives of  
20 transmission lines. For example, transmission line 124L was originally planned for  
21 rebuild in 2011, but was deferred to 2022 through routine maintenance.<sup>4</sup>  
22

23 Overall, the combination of transmission line rebuilds and the selective replacement of  
24 deteriorated components has allowed Newfoundland Power to maintain its electrical  
25 system in a manner consistent with the least-cost delivery of reliable service to  
26 customers.  
27

28 Newfoundland Power does not have information pertaining to the average age of  
29 transmission lines replaced by other Canadian Utilities.

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<sup>2</sup> A copy of the Company's *Transmission Inspection and Maintenance Practices* can be found in response to Request for Information NLH-NP-001, Attachment B in Newfoundland Power's 2020 *Capital Budget Application*.

<sup>3</sup> The *Transmission Line Rebuild Strategy*, filed with the Company's 2006 *Capital Budget Application*, noted: "Prior to the amalgamation of the three largest utilities in the province in 1966 (United Towns Electric, Newfoundland Light & Power, and Union Electric) there was limited transmission design expertise in any utility. There was little consistency in the design of transmission lines and, as a result, many lines built before 1960 were not designed to any standard (and do not meet present day standards)" (page 4).

<sup>4</sup> See response to Request for Information CA-NP-029.